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CLAIMS

1. Arrangement for analysing, simulating and/or monitoring functions and/or structures in a distributed control system
- 5 (24) that works with a first protocol (29), characterized in that a first unit (23, 26) is connected or can be connected to the control system via contacts (5', 6', 6''), which first unit by means of the first protocol receives and/or sends task instructions concerning the functions
- 10 and/or structures, in that the first unit is connected to a second unit (22), in that the second unit in turn is connected or can be connected either to a tool arrangement interactable with a user and comprising a computer equipment (21) adapted with large capacity in order to be
- 15 able to carry out sophisticated calculation, simulation and/or analysis tasks, or to a PDA unit or corresponding unit connected or connectable to a computer equipment adapted to configure the PDA unit or the corresponding unit, which PDA unit or corresponding unit is adapted to
- 20 carry out more limited tasks of the mentioned kind, in that the first unit transforms at least those parts in the first protocol (29) that relate to said tasks into a second protocol (28), by means of which the tasks or parts of tasks can be transformed to the second unit (22), in that
- 25 the second unit by means of the second protocol or a third protocol (27) can communicate with the tool arrangement, which at readings and/or modifications in the first protocol and in the first and second protocols, respectively, treats the same with readings and/or
- 30 modifications in the second and third protocols, respectively, in that the first unit (23 or 26) comprises at least one microprocessor which communicates partly with

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the control system by means of connection, protocol and bit speed valid for the control system, partly with the second unit (22), and in that the second unit is equipped with at least one microprocessor, as well, by means of which  
5 microprocessor the second unit is adapted to exchange information with the first unit and the tool arrangement.

2. Arrangement according to claim 1, characterized in that the second protocol is developed specially to serve as a  
10 common platform for the analysis of two or more systems with different or the first protocol, respectively.

3. Arrangement according to the claim 1 or 2, characterized in that the second unit provides a common  
15 time base for first units (23) working in parallel.

4. Arrangement according to any of claims 1-2, characterized in that the first unit or first units (23) are arranged for independent collection; processing and  
20 saving of information from the connected system and in that the information generated in this way is arranged to be able to be read and/or interpreted via the generated information via the second unit (22).

25 5. Arrangement according to any of claims 1-4, characterized in that second parts of task instructions downloaded or transferred from the computer equipment (21) can be allocated to a number of technicians for use of PDA units in different systems.

30 6. Arrangement according to any one of the preceding claims, characterized in that in the interaction between

the computer equipment and the user, rules are generated for automatic repetition, and in that the rules can be modified for a PDA unit with regard to the collected information and the presentation of the analysis result.

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7. Arrangement according to any of claims 1-6, characterized in that the tool arrangement is adapted with a connection arrangement adapted to communicate with one or more microprocessors via serial or wireless communication, for example USB, Ethernet, etc.

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8. Arrangement according to any of the proceeding claims 1-7, characterized in that the first or second unit is adapted to communicate via a serial communication, for example CAN or LIN, in one direction and with a microprocessor (4) via a serial communication, for example CAN, USB, etc. towards the other direction and to work with reduced interface, for example light diod(-s), summer, etc., toward user(-s).

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9. Arrangement according to any of the claims 1-7, characterized in that the first or second unit communicates with one or more units via a serial communication by means of a microprocessor and works with reduced interface toward a user(-s), carries out processing of signals from another unit according to rules attained from another unit, and comprises a number of units having microprocessors which communicate with serial communication.

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10. Arrangement according to claim 9, characterized in that the units comprise a local clock which respectively is adjusted or related to a clock in another unit.

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